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Published Version

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Hewitt, O., Tomlin, A. and Waite, P. ORCID:  
<https://orcid.org/0000-0002-1967-8028> (2021) The experience of panic attacks in adolescents: an interpretative phenomenological analysis study. Emotional and Behavioural Difficulties. ISSN 1363-2752 doi:  
<https://doi.org/10.1080/13632752.2021.1948742> Available at  
<https://centaur.reading.ac.uk/98830/>

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To link to this article DOI: <http://dx.doi.org/10.1080/13632752.2021.1948742>

Publisher: Taylor and Francis

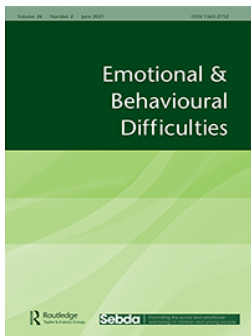
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To cite this article: Olivia Mary Hewitt, Alice Tomlin & Polly Waite (2021): The experience of panic attacks in adolescents: an interpretative phenomenological analysis study, Emotional and Behavioural Difficulties, DOI: [10.1080/13632752.2021.1948742](https://doi.org/10.1080/13632752.2021.1948742)

To link to this article: <https://doi.org/10.1080/13632752.2021.1948742>



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Published online: 10 Sep 2021.



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# The experience of panic attacks in adolescents: an interpretative phenomenological analysis study

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## ABSTRACT

Panic attacks are common in adolescents and are experienced in several mental health difficulties. In adults, cognitions during panic attacks comprise mental images as well as thoughts. No qualitative research into panic attacks has been conducted with adolescents. Better understanding of the experience of panic attacks, including the presence and nature of mental images, may improve treatments. Nine adolescents (15–18 years) completed a semi-structured interview exploring experiences of panic attacks. Data was analysed using Interpretative Phenomenological Analysis. Six superordinate themes reflected the intense nature of having a panic attack, being unable to think and fearing losing control of one's mind, a disconnect in feeling the panic attack would never end versus knowing from experience that it would, feeling completely out of control during the attack, feeling embarrassment and shame, feeling cut-off and isolated from others, and trying to find ways to cope through distraction, avoidance and learning to understand the thoughts. Mental images enhanced the intensity of panic. Several aspects of the findings were consistent with the cognitive model of panic disorder in adults. The impact of panic on normative adolescent developmental tasks is discussed. Interventions should be adapted for adolescents' developmental stage and consider any mental images.

## KEYWORDS

Adolescent; Panic Attacks; Anxiety; Mental Imagery; Qualitative

## Introduction

Panic attacks are sudden surges of intense fear that reach a peak within minutes, with at least four physiological or cognitive symptoms (American Psychiatric Association [APA], 2013). Symptoms include an accelerated heart rate, sweating, shaking, shortness of breath, chest pain, nausea, dizziness, depersonalisation, and fear of losing control, 'going crazy', or dying. Panic attacks (that meet diagnostic criteria) are common in adolescents, occurring in anywhere between 6–63% of adolescent community samples (Asselmann et al. 2016; Hayward et al. 2000; King et al. 1996; Macaulay and Kleinknecht 1989). They also commonly feature across various mental health diagnoses, including generalised anxiety disorder, social anxiety disorder and post-traumatic stress disorder, as well as panic disorder (APA, 2013). They are more common in girls than boys (Asselmann et al. 2016; King et al. 1996). They are highly distressing and are associated with a range of negative impacts, including poorer physical and interpersonal functioning (Marshall et al. 2008). Although effective treatments for anxiety disorders exist for children and adolescents (James et al. 2020), approximately half retain their primary anxiety disorder post-treatment. Given

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that panic attacks can be experienced by adolescents with a range of different anxiety disorders, a better understanding of how adolescents experience panic attacks may help to improve treatment.

While the symptoms experienced by adolescents during a panic attack appear to be similar to those in adults, there is currently limited information about adolescents' broader experiences of panic attacks, and this literature is relatively old. As with adults, symptoms in adolescents include both somatic (such as palpitations, nausea, and shortness of breath) and cognitive symptoms (such as a fear of losing control or dying) (Doerfler et al. 2007; Kearney et al. 1997). In adults with panic disorder, which is characterised by a fear of panic attacks themselves, such cognitions are conceptualised as misinterpretations of bodily sensations (Clark 1986). For example, an increased heart rate may be interpreted as a sign of an impending heart attack (Clark and Ehlers 1993). Raffa, White, and Barlow (2004) asked adults with panic disorder what they feared happening as a result of panic attacks. The most common feared consequences were related to social evaluation concerns (such as 'I may embarrass myself'), specific physical catastrophe ('I may die'), loss of behavioural control ('I may go crazy'), altered ability to maintain role functioning ('I won't be able to do my job'), and discomfort perceived as intolerable ('it feels bad').

In adults with panic disorder, cognitions during panic attacks take the form of mental images as well as thoughts (Kosslyn, Ganis, and Thompson 2001). They typically elicit emotions more easily and intensely than verbal thoughts (Kosslyn, Ganis, and Thompson 2001), and play an important role in various psychological disorders in adults (Holmes and Mathews 2010). Day, Holmes, and Hackmann (2004) reported that adults with panic disorder and agoraphobia described having mental images during panic attacks that were associated with memories of distressing events (e.g., being victimised as a child). These images contained body sensation perceptions in addition to the visual sensory modality. Interestingly, the events that were recalled as memories 35 years later as adults were reported to have taken place during adolescence, suggesting this is a critical period where some negative experiences are encoded and retained in a way that appears to form the basis for subsequent imagery. While there is no research on imagery in adolescents with panic attacks, adolescents with social anxiety disorder report experiencing negative images of themselves from an observer's perspective in social situations, at higher levels than controls (Ranta et al. 2014; Schreiber and Steil 2013). Furthermore, the frequency, vividness and distress associated with the images were predictive of social anxiety disorder symptoms (Schreiber and Steil 2013). Adolescents may be particularly vulnerable to the effects of mental imagery as the cognitive skills needed to manipulate mental images are supported by brain regions that are still developing in adolescence (Burnett Heyes, Lau, and Holmes 2013).

There may be other important factors in adolescents' experience of panic attacks that reflect this being a transitional developmental period marked by changes across many domains. Adolescence is a key stage for the development of a sense of identity (Kroger 2004). Social-evaluative concerns become heightened, with young people becoming less reliant on parents and increasingly focused on connections with peers (Newman and Newman 2001; Zimmer-Gembeck and Collins 2006). In addition, most adolescents are still in compulsory education. Given that adolescents report panic attacks frequently occurring during periods of high stress, speaking or acting, and tests (Macaulay and Kleinknecht 1989), it will be important to understand the experience of panic attacks within this highly social environment.

To date, there is no published qualitative research on adolescents' experiences of panic attacks. Qualitative research aims to understand a person, event, or process, and prioritises gaining a detailed knowledge of individuals by exploring understandings and meanings in a small number of participants. This can be beneficial to understand a phenomenon, such as panic attacks, that is previously unexplored (Smith, Flowers, and Larkin 2009).

This study sets out to explore the experience of panic attacks in adolescents (aged 14–18 years), using a qualitative approach. As mental imagery may be an important part of the experience of panic, and adolescents may be particularly vulnerable to its effects on emotion (Burnett Heyes, Lau, and Holmes 2013), we also set out to explore adolescents' experiences of mental images during panic attacks.

## Method

### *Design and methodology*

This study employed an exploratory qualitative design with interpretative phenomenological analysis (IPA) methodology, using semi-structured one-to-one interviews. IPA provides rich, detailed accounts of participants' experiences, and develops an interpretative analysis to position these within a wider context (Larkin, Watts, and Clifton 2006). IPA's idiographic nature, focusing on a small number of participants, allows for exploration of individual differences.

### *Participants*

To be included in the study, adolescents had to be within the age range of 14–18 years and have experienced panic attacks within the last year. The lower end of this age range was selected as studies indicate that panic attacks/panic disorder typically begin in mid-adolescence (Von Korff, Eaton, and KEYL 1985). In the UK, adolescents are in compulsory education, typically living with their families, until the age of 18 years and therefore this was selected as the upper age range. Exclusion criteria were an identified learning disability, and insufficient fluency in English to participate in an interview.

Nine young people participated in the study, eight girls and one boy, aged between 15–18 years. In order to increase homogeneity within the sample, all participants had experienced one or more panic attack in the past month and scored within the clinical range on a measure of panic disorder symptoms (the PDSS-C). Eight participants scored in the clinical range on the RCADS panic subscale, with one participant scoring in the borderline clinical range. Table 1 summarises participant's demographic and clinical characteristics.

### *Sampling and recruitment*

Purposive homogeneous sampling was used to recruit young people experiencing panic attacks (Smith, Flowers, and Larkin 2009). Adolescents were recruited from local schools, social media and a public mental health awareness event. Young people contacted the researcher (AL) by email, who then sent information sheets to the young people and their parents and answered any questions they had prior to the interview. Parental consent and adolescent assent were obtained from participants under the age of 18 years, and written consent from adolescents who were aged 18 years. Seven participants were recruited from three schools, one from social media advertising, and one from a mental health awareness public event. Participants were offered a £10 Amazon voucher for their participation.

### *Procedure*

Ethical approval was obtained from Oxford Central University Research Ethics Committee (R55454/RE001). Interviews were conducted by AT, at participants' home or school and all interviews were audio recorded. At the beginning of each interview, participants completed paper questionnaires. After the interview, participants were given the opportunity to ask any further questions and were given comprehensive information about sources of support, including both relevant NHS and third sector services, online and in person services, and self-help and psychoeducation materials. Interviews were transcribed verbatim.

### *Measures*

#### *Contextual information and clinical measures*

Contextual information including participants' age, gender, estimated number of panic attacks in the past month and six months, how long they had experienced panic attacks, and details of any treatment were recorded.

Table 1. Participants' demographic and clinical characteristics

Participant <sup>a</sup>	Age	Gender	Ethnicity	No. of years experienced panic attacks	No. of panic attacks in last month	No. of limited symptom attacks in last month	PDSS-C total score <sup>b</sup>	RCADS Panic T score	RCADS Total Anxiety & Depression T score	Current and past treatment for panic attacks
Jenny	15	Female	White British	4	3	5	12	>80**	>80**	Currently receiving CBT, medication
Tanya	17	Female	White British	2	3	5	8	68*	59	No
Sarah	18	Female	White British	14	5	2	10	70**	58	No
Maya	17	Female	Asian or British	4	3	"lots"	17	75**	76**	Currently receiving CBT, medication
Alex	16	Female	White British	3	5	15	10	80**	62	No
Ella	18	Female	White British	2-3	7	10	14	>80**	75**	Awaiting treatment
Emily	18	Female	White British	8	1	2	11	>80**	76**	Awaiting CBT; previously received counselling
Sam	16	Male	White British	3	1	2	17	>80**	>80**	Currently receiving medication
Ashley	15	Female	White British	4	2	2	14	>80**	64	No; previously received CBT

Notes

Table Note. CBT = Cognitive Behaviour Therapy; PDSS-C = Panic Disorder Severity Scale for Children; RCADS = Revised Child and Adolescent Anxiety and Depression Scale. <sup>a</sup> All participant names have been substituted for pseudonyms. <sup>b</sup> Maximum score on PDSS-C is 28. \* T score in borderline range; \*\* T score in clinical range.

Participants completed two questionnaires: the Panic Disorder Severity Scale for Children and Adolescents (PDSS-C, Elkins, Pincus, and Comer 2014), and the Revised Child Anxiety and Depression Scale (RCADS, Chorpita, Moffitt, and Gray 2005). The PDSS-C (Elkins, Pincus, and Comer 2014) assesses symptoms of panic disorder in children and adolescents. It has seven items relating to the experiences of panic attacks in the past week. Responses are made on a scale from 0 to 4, with a maximum score of 28. There are no published cut-off criteria for children and adolescents. However, for adults, a cut-off score of eight identifies panic disorder with reasonable sensitivity and specificity (Shear et al. 2001). The PDSS-C has good psychometric properties for this age range (Elkins, Pincus, and Comer 2014). The RCADS (Chorpita, Moffitt, and Gray 2005) assesses symptoms of anxiety disorders and depression in young people aged 8–18 years. It has 47-items that are rated on a scale from 0 ‘never’ to 3 ‘always’. Items relate to five anxiety subscales (panic disorder, separation anxiety disorder, social anxiety disorder, generalised anxiety disorder and obsessive compulsive disorder) and low mood (major depression disorder). It also generates a Total Anxiety Scale and a Total Internalising Scale. Normative data is available for subscales and total scores, with a borderline clinical threshold of a T-score of 65, and a clinical threshold of a T-score of 70. The measure has good psychometric properties within this age range (Chorpita, Moffitt, and Gray 2005).

### *Interview schedule*

A semi-structured interview schedule was developed following a review of literature on adolescent panic attacks, and in consultation with IPA researchers and adolescents with lived experience of mental health difficulties. Questions explored the experience and meaning of panic attacks including any mental images experienced during panic attacks. The schedule was used flexibly so participants’ concerns could be pursued as they arose.

### *Analysis*

Each transcript was coded with descriptive, linguistic and conceptual comments. Notes were made of emerging themes in each transcript, which were refined by seeking patterns and connections between them to develop super-ordinate themes (Smith, Flowers, and Larkin 2009). Themes were examined together to look for patterns across participants and develop the final set of themes. Individual transcripts were revisited with these themes in mind, in an iterative process to ensure each participant’s voice was captured. This allowed for the double hermeneutic commitment in IPA by moving backwards and forwards between considering individual transcripts, and the analysis as a whole. Coding and theme development was led by AT, with regular discussion/input from other team members (OMH, PW) to ensure that the analysis was grounded in the transcripts. During these discussions, the research team also reflected on their prior assumptions and knowledge in the relation to the subject area. AT was a trainee clinical psychologist, and OMH and PW are clinical psychologists and researchers, working in the field of intellectual disabilities (OMH) and adolescent anxiety (PW). AT also received additional input from peer IPA researchers. These discussions within and beyond the research team highlighted any areas where the link between interpretative comments or themes and the raw data was less clear and allowed for discussion of how the researchers’ own beliefs and preconceptions might influence analysis.

Quality assurance in qualitative research (Yardley 2000) was considered throughout this study. To ensure sensitivity to context, efforts were made during data collection to address the power imbalance between the researcher (AT) and adolescent participants (e.g., starting with a brief general conversation to put the young person at ease and ensuring language was not overly formal). To enhance the rigour and transparency of the study, an audit trail was kept throughout the process of analysis documenting how themes developed for each participant and across participants. In addition, a bracketing interview was carried out before data collection to explore the researcher’s



beliefs about the research area, and continued through a reflective log (Vicary, Young, and Hicks 2017).

## Results

Analysis generated six superordinate themes with four subordinate themes. Please see [Table 2](#) for themes and the extent to which they were endorsed by participants.

### 1. 'A malevolent tsunami': natural disaster as a metaphor for panic attacks

Panic attacks were often described using metaphors and language resonant with a natural disaster or extreme weather event. Maya described them 'like a tornado, a storm ... a malevolent tsunami that has engulfed my soul'. For Jenny, 'it kind of feels like this wave ... and I can like feel it building up and up and up, until like, it it hits and then it's like a full blown one'.

For others, panic attacks were compared with natural disaster in their intensity and overwhelmingness. Emily described them as an 'uncontrollable force', for Ashley they felt 'infinite'. Jenny stated, 'you feel like you're dying kind of', and Tanya similarly said 'it felt almost kind of like I was dying but not', illustrating an intensity of feeling.

Participants described knowing when a panic attack was imminent, in a similar way to how a storm or weather event can be forecast. Emily said 'normally there's a sort of progression – I can feel it ... brewing, in a way', Sarah described that 'usually I can kind of feel like a build-up of it', and Ashley could 'sort of tell it's about to happen'. However, like the weather, panic attacks could be unpredictable and seem to come 'just full on, all of a sudden' (Sarah). Ashley might not understand why a panic attack happened: 'it didn't have any reason to be causing me to panic, but it just did'. Ella felt it was 'worse when it [a panic attack] springs up' because 'you can't sort of prepare yourself'. Jenny felt able to cope if she could feel a panic attack approaching, but once she was 'in the middle of one I can't really do anything but just wait for it to go'. Ashley also expressed powerlessness over the panic attacks: 'Oh this is just a thing that occasionally happens, I just occasionally feel like I can't breathe ... That's just going to be a part of my life'.

### 2. 'It was kind of like battling against myself': disconnection between parts of self during panic attacks

Most participants described a duality in their understanding of panic attacks; both fearing they might be harmed or become stuck in the panic attack, whilst simultaneously recognising that this had never happened previously and knowing the panic attack would end. Sam described how 'afterwards it feels completely different to compared to when it actually does happen'. Ashley described how a part of her was convinced that the panic attack would not end even though she knew that it would. This part that was 'in charge' during the panic attack did not seem to have access to the knowledge that the other part of herself had, and there was a sense of disconnection:

It doesn't feel like it's ever going to end, even if you know that logically it is, your brain's just going, no this isn't going to happen. This is ... this is it! ... You can only see what's happening now. You can't see what's happened before, and you can't see like a future (Ashley)

Emily described 'Part of my brain's like, it's never going to stop, and then the other part is, you know it's going to stop, it's stopped before, it's fine', with these two parts 'battling' against each other. Alex explicitly stated that 'it was kind of like battling against myself', and Jenny said, 'I feel like I'm taken hostage by my brain'.

Participants who experienced mental images during panic attacks described the images as being created by one part of themselves and evaluated by another part. Emily said, 'It's almost like my brain has a brain of its own ... like sort of putting really bad situations that I know won't happen'. Similarly,

Table 2. Endorsement of Superordinate and Subordinate Themes

Themes	Jenny	Tanya	Sarah	Maya	Alex	Ella	Emily	Sam	Ashley	Total
1. "A malevolent tsunami": Natural disaster as a metaphor for panic attacks	*	*	*	*		*	*	*	*	8
2. "It was kind of like battling against myself": Disconnection between parts of self during panic attacks		*		*	*	*	*	*	*	7
3. Feeling out of control:	*	*	*	*	*	*	*	*	*	9
3a. "It's like something else is taking over your body and mind"		6								
3b. "This is it, I'm gone": Feeling of losing control over one's mind	*		*		*		*	*	*	6
4. "I feel like a bit of a weirdo": Panic attacks affect identity	*		*	*	*	*	*	*	*	8
5. Disconnection from others:	*	*	*	*	*	*	*	*	*	9
5a. "People might think, oh she's just over-reacting": Others not understanding what panic attacks are like	*	*	*	*	*	*	*	*	*	8
5b. "You feel like you're imprisoned": Feeling isolated	*	*	*	*	*	*	*	*	*	8
6. Finding ways to cope	*	*	*		*	*	*	*	*	8

Ella reported 'I'm not stupid, I know it's not there, but at the same time, my brain's created this thing and I'm still scared that it could be there', suggesting she felt mental images came from a different part of her brain. Mental images occurred around feared future events. Emily reported 'I have images of the worst thing happening. Or like very bad situations happening' and Ella agreed 'I feel like these images are things that I'm scared of ... like they're made of exactly what, my brain sort of knows exactly what I'm scared of, and then the image is what I'm scared of'.

### 3. Feeling out of control

Every participant described feeling out of control during the panic attack. Maya described that 'once you're in the grip of it, it's like you can't just switch off, it just gets worse and worse', and Alex added 'by the time your head's up there, you're like, how do I get out?'. Sarah worried about getting stuck in the panic attacks: 'during, I either feel like that actual panic attack itself is never gonna end, or I'm gonna kind of get out of that panic attack, and then just have a load more'.

#### 3a. *'It's like something else is taking over your body and mind'*

For six participants, feeling out of control was related to a sense of an external force acting on them so that their control over themselves was lost. Two participants described mental images of this malevolent, external force. Maya's image was like a 'dementor' (a character from the 'Harry Potter' book series) 'sucking the life out of me'. Jenny's image was of a force attacking her thoughts, confusing her thinking: 'it feels like there's this thing like hitting my rational thoughts and kind of squashing them'. Some participants felt that the panic attacks were compromising their autonomy, preventing them from doing what they would want to do. Maya described a 'sinister nothing', which was 'dragging you to a dark side [] it just wants you to not have a life, and it says that it will accompany you'. Ella also spoke about this hijacking: 'Sometimes I just feel like I don't even want to stop, getting out of the state because I'm thinking so adamantly about what I don't want to do, or what's happening'. It seemed here as if her will was taken over and it was the external force's will that was at the fore.

Some participants reported feeling overtaken by the external force and losing their sense of self. Sarah felt that during a panic attack, 'it's like I'm a completely different person', and Tanya felt 'like it was consuming me'.

#### 3b. *'This is it, I'm gone': feeling of losing control over one's mind*

Several participants described not being able to control their mind during a panic attack. Sam described 'my head's just spinning out of control', and for Maya it was as if 'your ears kind of like blank out, as in you can't, you can't make sense, everything like, you just hear loads of voices just in your ears like, and it's very hard to concentrate'.

Several participants described a lack of clarity to their thoughts during a panic attack. Ella said 'you can't think about anything else but what's going on. But you can't ... you don't even know what is going on', suggesting a feeling that her mind is stuck. Jenny also had this sense, saying, 'there's just like random things just flying through my head, but I don't like, I can't really make out what those [thoughts] are', which added to her distress.

Participants expressed fear that their mind might 'break'. Sarah said, 'I kind of switch into like a panic mode and I thought, 'oh no, I'm not going to be able to go back to normal now''. Ashley stated: 'I thought maybe like 'I'm going insane. This is it. I'm gone' ... 'This is always going to happen''. These accounts suggest a state from which participants could not return, in which their sense of self is permanently lost.

Mental images seemed to enhance this sense of losing control as they came unbidden and could be very frightening. 'I guess they're a bit like hallucinations really I don't know but they really, they

scare me quite a bit' (Jenny). For Ashley, they caused her to question her mind: '[images are] kind of like disturbing ... I don't trust myself'. Participants experienced imagery in other modalities such as aural images with Ella describing 'I quite often can sort of imagine like screaming' and Jenny's description of tactile images 'I can like feel the hammer'.

#### 4. 'I feel like a bit of a weirdo': panic attacks affect identity

Participants felt embarrassment and shame around panic attacks, describing them as embarrassing and needing to be hidden. Emily said, 'I don't want people to see me like that', and Maya worried 'that they'll [friends] be embarrassed to be around me'. Alex tried to hide her panic attacks so 'people don't think that I look like I walk around looking like a nervous like wreck'. Ella also talked about being 'in a state' when she has a panic attack, in which a 'state' seemed like a mess, or something unsightly.

Panic attacks were perceived as embarrassing with participants describing both stigma and self-stigma. Jenny felt 'like a bit of a weirdo' when panic attacks happened unexpectedly. Maya reported feeling 'worthless because no one else is, it's not happening to anyone else', and so hid her panic attacks from others. Emily didn't want her friends to know about her panic attacks because 'I don't want people to think I'm weak in any way'. Sarah said 'I don't really want [my friends] to know, I don't want to seem weird'. Maya thought that if her friends knew about the panic attacks, they might think 'possibly that I'm weak or a bit mental'.

Images could centre around past distressing events such as being bullied, as Sam experienced 'I sort of see like the video of what had happened [] It's just really uneasy and distressing to watch' or an accident described by Ashley 'I was just like imagining sort of the hospital and me lying there'.

#### 5. Disconnection from others

Participants felt cut-off and alone with their experiences. There were two, inter-related subthemes of feeling that others cannot understand panic attacks and feeling isolated. As participants felt that others did not understand the experience of panic attacks, they felt isolated and separate; and as a result of feeling isolated and unable to connect with people, there seemed no way for people to 'come in' to the experience and have the opportunity to understand it.

##### 5a. 'People might think, oh she's just over-reacting': Others cannot understand what panic attacks are like

Many participants felt others didn't understand what it was like to have panic attacks, and such understanding was only possible through direct personal experience of panic. Sarah said 'you can't really fully understand the feeling unless you've really ... had those thoughts in your mind and gone through that yourself'. Jenny said her teachers 'don't really understand it because they've not had one themselves'. For Maya this lack of understanding from others seemed particularly pronounced, 'loads of people just say that it's all in your head, you're making it all up'.

This lack of understanding resulted in other people either minimising their experience of panic or overreacting to a panic attack. Some people underestimated the severity and impact of panic attacks which seemed dismissive: 'People try and normalise it, and I think that's where it goes wrong ... they need to notice and understand that although you want to try and normalise it, it's not normal and it's scary' (Tanya)

Jenny described how teachers misunderstood her panic attack and thought she was misbehaving. Ashley felt misunderstood by her father, saying 'he was like kind of, 'You see, it's over now. There was nothing to worry about'', which made her feel 'sad and tired and a bit angry at him'. Ella was told 'you didn't need to worry', and said that 'I'm like, 'I don't want you to tell me it's OK. Because like my brain's telling me it's not OK at all'.

However, sometimes participants felt people overreacted to their panic attacks; Jenny described having a panic attack in a lesson and, 'everyone reacted as if like a war was breaking out'. Emily spoke about a friend who, when Emily had a panic attack, 'was so scared for me that she had a panic attack herself'.

### 5b. *'You feel like you're imprisoned': feeling isolated*

Most participants felt disconnected from others due to panic attacks. They felt trapped by the panic attacks, with a barrier between them and the rest of the world. Maya felt that 'everyone else's life is like fleeting by and you're just sort of stuck in your own body'. Jenny described a mental image related to this, in which she was stuck in a tube during panic attacks which prevented her from reaching others, and others from reaching her.

I see myself in my head in this tube and when erm, when I'm having one and I can't move I feel like the tube's getting smaller and smaller, and then it, I can feel physically, well I know I can't but it's my head but I can feel, myself kind of being squashed in and I feel like I'm being crushed . . . and then like, there are all the people on the outside like, erm, that, like are trying to like get me out. And I know they're all free and I want to be free as well but I can't because of like my brain.

This image gave a sense of Jenny feeling that she is alone with her experience and separated from other people. Alex also felt that 'no one could help me except myself'.

Panic attacks caused participants to withdraw from others and prevent them from engaging in activities with their peers, which contributed to a disconnection and separation from others. Ella said 'I just want to shut off and stay in my room by myself', and Ashley felt 'isolated away from other people who could just . . . like all my friends can all go and do [school event] without any issues . . . therefore there's something wrong with me because I can't'. Tanya said having panic attacks 'affects simply not wanting to go to a friend's because you feel like you're gonna be worried or you feel like you're gonna have a panic attack'. Emily noted that panic attacks 'can definitely stop me from doing a lot of things in life', and said she had 'persuaded myself that I wouldn't have fun doing that anyway'.

## 6. Finding ways to cope

Most participants described ways of trying to cope with panic attacks. Several used distraction: Alex would 'get my friends to distract me, because that's like the best thing', Sam would 'try and create distractions to try and ease myself', and Sarah 'tried to concentrate on school, and tried to concentrate on my friends, try to find a distraction'. Tanya felt distraction prevented her from losing control:

'I don't know what would happen if I didn't distract myself . . . I don't know what would be on the other side of that, what would happen, it's not something I'm willing to take a risk to find out' (Tanya)

Some participants coped by removing themselves from a situation. For Sarah, 'I think one of the best things is to take me out of the situation I'm in', and Tanya similarly said 'I knew that it was gonna get worse if I just stayed there'.

Ashley found therapy helpful in understanding her thoughts during a panic attack and her reactions to these. This understanding made it easier to cope with the panic attacks, 'because I kind of know there's a process behind it, and I can stop it happening, rather than just, 'I can't stop this, they just happen when they want to happen''. Such knowledge fostered a sense of control and autonomy.

## Discussion

This study explored adolescents' lived experience of panic attacks in nine adolescents aged 15–18 years. Six superordinate themes were developed that reflected the extreme and intense nature of having a panic attack, being unable to think and fearing losing control of one's mind, a disconnect in feeling the panic attack would never end versus knowing from experience that it would, feeling completely out of control during the attack, feeling embarrassment and shame, feeling cut-off and isolated from others, and trying to find ways to cope through distraction, avoidance and learning to understand the thoughts (through therapy). Where mental images were reported (by five participants), they enhanced the intensity of the panic attack.

It was notable that several aspects of these findings relate to the cognitive model of panic disorder in adults (Clark 1986). Consistent with findings from studies of symptoms in children and adolescents with panic disorder (Doerfler et al. 2007; Kearney et al. 1997), participants described (mis)interpreting intense bodily sensations as signs that they were out of control, going crazy or potentially dying. They also reported a phenomenon seen in cognitive therapy (Stott 2007), where there is a dissociation between their rational beliefs and the way it 'feels' during a panic attack. To try to cope during a panic attack, they used distraction (potentially acting as a safety behaviour; Thwaites and Freeston 2005) and avoiding or escaping from situations when the sensations became too much. Within the cognitive model, these misinterpretations and consequent behaviours act as a vicious cycle, further intensifying the sensations and cognitions (Salkovskis, Clark, and Gelder 1996). Interestingly, one of the participants who had CBT reported that understanding the process meant that she was able to stop the cycle. Nevertheless, she and the two other participants who were currently receiving CBT were continuing to experience panic attacks. Going forward, it will be important to understand adolescents' experiences of treatment to determine what is and is not helpful, to improve the effectiveness of therapy.

Five of the nine participants experienced mental images during panic attacks and they were associated with intense emotion (Holmes et al. 2008), enhancing the sense of losing control over one's mind, feeling disconnected from others, and being acted on by an external force. There were similarities with images reported by adults with panic disorder (Day, Holmes, and Hackmann (2004), where images were experienced within multiple sensory modalities and included memories of unpleasant past events. As well as memories of past events, the images experienced within this adolescent population also included imagined negative future events as well as images elaborating on panic attack symptoms. Further research to fully understand the role played by mental imagery in panic attacks is warranted.

Experiencing panic attacks appeared to be having a negative impact on adolescents' psychosocial development during this crucial stage. Firstly, participants' sense of self seemed affected, with negative self-perception described as a result of having panic attacks. Participants described withdrawing from social activities and friendships, which may also then limit opportunities for identity exploration, which could also interfere with developing a sense of identity (Erikson 1968). Secondly, a diminished sense of control and the use of escape and avoidance to deal with panic attacks may interfere with the development of autonomy (Zimmer-Gembeck and Collins 2006). Thirdly, the experience of feeling isolated and disconnected from others could interrupt the key adolescent process of forming peer connections and developing a group identity (Newman and Newman 2001). This is of concern given that social isolation in adolescence increases risk for low self-esteem, depressive symptoms, and suicide attempts (Hall-Lande et al. 2007).

## Strengths and limitations

These findings must be considered in light of strengths and limitations. Participants were recruited on the basis that they had experienced panic attacks over the course of the previous year; all nine participants scored at or above the established clinical cut-off on a measure of panic symptoms and

eight scored in the clinical range on the panic disorder subscale of a measure of anxiety symptoms. However, they were not required to have any specific diagnosis, which may have resulted in a heterogeneous sample. Despite a small sample size, rigorous use of an appropriate qualitative methodology to analyse the data, allows some assurance that results have a validity which allows theoretical rather than statistical generalisability (Yardley 2008). Eight participants were female with only one male participant. Eight participants were White British, with one from Asian ethnicity. Additional aspects of the experiences of panic attacks may have been uncovered with other male participants, or participants from a more diverse ethnic background. However, neither gender nor ethnicity arose as a topic in findings, and the concerns and experiential claims raised by the male participant and the Asian participant echoed those raised by other participants. Further research that seeks out more diverse perspectives may allow additional findings to arise.

### **Implications**

This study was conducted with a community sample; further qualitative investigation with a clinical sample of participants diagnosed with panic disorder would address the limitation of potential diagnostic heterogeneity in the sample. It was notable that three participants who scored in the clinical range on the measure of panic disorder severity had not been referred for or received treatment. It was unclear whether this was because they had not sought treatment, or whether service requirements meant that they were not experiencing symptoms that would meet the threshold for services. There are multiple barriers to accessing mental health support and treatment, especially for adolescents (Radez et al. 2021). One participant had completed treatment and had clearly found some benefit in developing her understanding of panic attacks and how to cope with them, underlining the importance of improving access to treatment for young people experiencing panic attacks. Nevertheless, as outlined earlier, she (and other participants in treatment) continued to experience symptoms and so a better understanding of participants' experiences of therapy and a consideration of how it could be improved will be important. Given that panic attacks may interfere with normative developmental processes, treatments provided to adolescents should be tailored to the individual's developmental stage by facilitating autonomy, addressing issues that relate to self-esteem and identity if required and ensuring that support provided by family members, peers and teachers is appropriate. Finally, clinicians should consider mental images, which may be a useful target for intervention. Some people may be reluctant to disclose mental images for fear that they signify 'going insane' (Hackmann, Bennett-Levy, and Holmes 2011), so clinicians should directly enquire about images in a sensitive way. Using techniques that target mental images may be beneficial for adolescents. For example, imagery rescripting, which involves helping a person to transform a distressing image to reduce its power, has been used successfully with socially anxious adolescents (Leigh and Clark 2016; Leigh et al. 2020), and may be of benefit to adolescents with distressing mental images during panic attacks.

### **Conclusion**

This study highlights the distressing and overwhelming nature of panic attacks. The IPA methodology allows for the idiographic experiences of participants to be heard within the research. It demonstrates that several aspects of these findings are consistent with the cognitive model of panic disorder in adults, and for some, mental images appear to intensify the experience. Panic attacks in adolescence can interfere with tasks of typical psychosocial development. Clinical interventions should consider each young person's developmental needs, and where relevant, the role of mental imagery in their experiences.



## Acknowledgments

We would like to thank all the young people who participated in this research. Data collection was completed as part of AT's Doctorate in Clinical Psychology dissertation. PW is supported by an NIHR Post-Doctoral Fellowship (PDF-2016-09-092). OH is supported by an NIHR Clinical Doctoral Fellowship (NIHR300501). The views expressed are those of the authors and not necessarily those of the NHS, the NIHR or the Department of Health. The research materials can be accessed by contacting the corresponding author.

## Disclosure statement

No potential conflict of interest was reported by the author(s).

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